BULLETIN OF THE AMERICAN MATHEMATICAL SOCIETY

A Historical and Critical Review of Mathematical Science

EDITED BY

F. N. COLE D. E. SMITH VIRGIL SNYDER
ALEXANDER ZIWET FRANK MORLEY
J. W. YOUNG W. B. FORD

VOL. XIV

October 1907 to July 1908

PUBLISHED FOR THE SOCIETY BY
THE MACMILLAN COMPANY
Lancaster, Pa., and New York
1908

VOLUME XIV., NUMBER 1

OCTOBER, 1907

Whole No. 161

CONTENTS

PAGE

Application of a Definite Integral Involving Bessel's Functions to the Self-Inductance of Solenoids. By Professor A. G. WEBSTER - - - - - - - - - - 1

On the Apsidal Angle in Central Orbits. By Dr. F. L. GRIFFIN - - - - - - - - - - - 6

The Maximum Value of a Determinant. By Professor E. W. DAVIS - - - - - - - - - - - 17

The Invariant Substitutions under a Substitution Group. By Professor G. A. MILLER. - - - - - - 19

Shorter Notices - - - - - - - - - - 21

Notes - - - - - - - - - - - 40

New Publications - - - - - - - - - 48

VOLUME XIV., NUMBER 2

NOVEMBER, 1907

Whole No. 162

CONTENTS

PAGE

The Fourteenth Summer Meeting of the American Mathematical Society. By Professor F. N. COLE - - - 53

On a Special Algebraic Curve Having a Net of Minimum Adjoint Curves. By Professor VIRGIL SNYDER - - 70

Note on Certain Inverse Problems in the Simplex Theory of Numbers. By Professor R. D. CARMICHAEL - - 74

Third Report on Recent Progress in the Theory of Groups of Finite Order. By Professor G. A. MILLER - - 78

Notes - - - - - - - - - - - 91

New Publications - - - - - - - - - 98

VOLUME XIV., NUMBER 3

DECEMBER, 1907

Whole No. 163

CONTENTS

PAGE

The September Meeting of the San Francisco Section. By Professor W. A. MANNING - - - - - - - 105

On Quadratic Forms in a General Field. By Professor L. E. DICKSON - - - - - - - - - - - 108

On the Canonical Substitution in the Hamilton Jacobi Canonical System of Differential Equations. By Dr. D. C. GILLESPIE - - - - - - - - - - 116

The Maximum Value of a Determinant. By Dr. F. R. SHARPE - - - - - - - - - - - 121

Third Report on Recent Progress in the Theory of Groups of Finite Order. By Professor G. A. MILLER - - - 124

The Dresden Meeting of the Deutsche Mathematiker-Vereinigung. By Professor C. A. NOBLE - - - - 133

Bryan's Thermodynamics. By Professor E. B. WILSON - 139

Shorter Notices - - - - - - - - - - - 144

Notes - - - - - - - - - - - - - 148

New Publications - - - - - - - - - 153

VOLUME XIV., NUMBER 4

JANUARY, 1908

Whole No. 164

CONTENTS

PAGE

The October Meeting of the American Mathematical Society. By Professor F. N. COLE - - - - - - - 157

On Triple Algebras and Ternary Cubic Forms. By Professor L. E. DICKSON - - - - - - - - - - 160

Isothermal Systems in Dynamics. By Professor EDWARD KASNER - - - - - - - - - - 169

On the Equations of Quartic Surfaces in Terms of Quadratic Forms. By Dr. C. H. SISAM - - - - - - 172

Symbolic Logic. By Professor E. B. WILSON - - - - 175

Shorter Notices - - - - - - - - - - - 191

Notes - - - - - - - - - - - - - 196

New Publications - - - - - - - - - - 198

VOLUME XIV., NUMBER 5

FEBRUARY, 1908

Whole No. 165

CONTENTS

PAGE

The First Regular Meeting of the Southwestern Section. By Professor O. D. KELLOGG - - - - - - - 203

Note on the Composition of Finite Rotations about Parallel Axes. By Professor ALEXANDER ZIWET - - - 208

On an Integral Appearing in Photometry. By Professor A. S. CHESSIN - - - - - - - - - - - 212

Hermitian Forms with Zero Determinant. By Professor J. I. HUTCHINSON - - - - - - - - 216

Two Tetraedron Theorems. By Professor H. S. WHITE - 220

Singular Points of a Simple Kind of Differential Equation of the Second Order. By Professor C. A. NOBLE - 22

The Theory of Electricity. By Professor E. B. WILSON - 230

Notes - - - - - - - - - - - - - 238

New Publications - - - - - - - - - 243

VOLUME XIV., NUMBER 6

MARCH, 1908

Whole No. 166

CONTENTS

PAGE

The Fourteenth Annual Meeting of the American Mathematical Society. By Professor F. N. COLE - - - 247

The December Meeting of the Chicago Section. By Professor H. E. SLAUGHT - - - - - - - - 256

Joint Meetings of Mathematicians and Engineers at the University of Chicago. By Professor H. E. SLAUGHT - 269

The Fifty-Eighth Meeting of the American Association for the Advancement of Science. By Professor G. A. MILLER - - - - - - - - - - 283

Shorter Notices - - - - - - - - - - 291

Correction - - - - - - - - - - - 297

Notes - - - - - - - - - - - - 297

New Publications - - - - - - - - - 300

VOLUME XIV., NUMBER 7

APRIL, 1908

Whole No. 167

CONTENTS

PAGE

Subjective Geometry. By Dr. G. W. HILL - - - 305
On Higher Congruences and Modular Invariants. By Professor L. E. DICKSON - - - - - - - - 313
Note on Jacobi's Equation in the Calculus of Variations. By Professor MAX MASON - - - - - - 318
On the Distance from a Point to a Surface. By Professor E. R. HEDRICK - - - - - - - - - 321
A Geometric Representation of the Galois Field. By Dr. L. I. NEIKIRK - - - - - - - - - 323
Concerning the Degree of an Irreducible Linear Homogeneous Group. By Professor W. B. FITE - - - 326
On the Lorentzian Transformation and the Radiation from a Moving Electron. By Dr. F. R. SHARPE - - - 330
Shorter Notices - - - - - - - - - - 336
Notes - - - - - - - - - - - - 341
New Publications - - - - - - - - - 347

VOLUME XIV., NUMBER 8

MAY, 1908

Whole No. 168

CONTENTS

PAGE

The February Meeting of the American Mathematical Society. By Professor F. N. COLE - - - - 351
The February Meeting of the San Francisco Section. By Professor W. A. MANNING - - - - - - 359
A Fundamental Invariant of the Discontinuous ζ-Groups Defined by the Normal Curves of Order n in a Space of n Dimensions. By Professor J. W. YOUNG - - 363
On Certain Constants Analogous to Fourier's Constants. By Mr. C. N. MOORE - - - - - - - - 368
Note on the Second Variation in an Isoperimetric Problem. By Dr. ELIJAH SWIFT - - - - - - - - 373
Note on a Certain Equation Involving the Function $E(x)$. By Professor R. D. CARMICHAEL - - - - - 376
The Inner Force of a Moving Electron. By Dr. F. R. SHARPE 378
The Recently Discovered Manuscript of Archimedes. By Professor C. S. SLICHTER - - - - - - 382
Shorter Notices - - - - - - - - - 393
Notes - - - - - - - - - - - 397
New Publications - - - - - - - - - 402

VOLUME XIV., NUMBER 9

JUNE, 1908

Whole No. 169

CONTENTS

PAGE

The April Meeting of the American Mathematical Society. By Professor F. N. COLE - - - - - - - 407

The April Meeting of the Chicago Section. By Professor H. E. SLAUGHT - - - - - - - - - - 414

Heinrich Maschke - - - - - - - - - 425

Criteria for the Irreducibility of a Reciprocal Equation. By Professor L. E. DICKSON - - - - - - - 426

A New Graphical Method for Quaternions. By Professor J. B. SHAW - - - - - - - - - - 430

Logic and the Continuum. By Professor E. B. WILSON - 432

Shorter Notices - - - - - - - - - - 444

Notes - - - - - - - - - - - 454

New Publications - - - - - - - - - 458

VOLUME XIV., NUMBER 10

JULY, 1908

Whole No. 170

CONTENTS

PAGE

The Inverse of Meusnier's Theorem. By Professor EDWARD KASNER - - - - - - - - - - 461

On the Distance from a Point to a Surface. By Professor PAUL SAUREL - - - - - - - - - - 465

On the Solution of Algebraic Equations in Infinite Series. By Professor P. A. LAMBERT - - - - - 467

The Deduction of the Electrostatic Equations by the Calculus of Variations. By DR. A. C. LUNN - - - - 477

The Fourth International Congress of Mathematicians. By DR. C. L. E. MOORE - - - - - - - 481

Shorter Notices - - - - - - - - - 499

Notes - - - - - - - - - - - 504

New Publications - - - - - - - - - 509

Seventeenth Annual List of Published Papers - - - 512

Index of Volume - - - - - - - - - 520